The JOURNAL of GEOGRAPHY

VOLUME L FEBRUARY, 1951 NUMBER 2

UNIVERSITY OF MICHIGAN
FEB 22 1951
PERIODICAL READING ROOM

In This Issue

The Role of Geography at the Mid-Century . . . . . *George H. T. Kimble*

Testing With Pictures . . . *Irene Brockmyer*

An Appreciation of the Puerto Ricans . . . . . *Luella N. Dambaugh*

Learning Readiness in Elementary Geography . . . . . *George T. Renner*

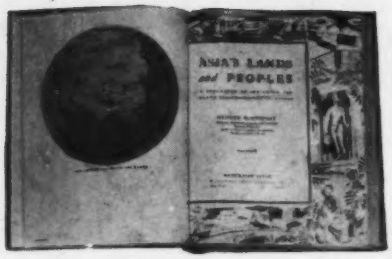
Three Pacific Northwest Dams . . . . . *Otis W. Freeman*

Report of the Thirty-sixth Meeting of the NCGT . . . . . *M. Melvina Svec*

National Council at Work . *Loyal Durand, Jr.*

Geographical Publications . . . . . .

Published by A. J. NYSTROM & CO., for THE NATIONAL COUNCIL OF GEOGRAPHY TEACHERS
THOMAS FRANK BARTON, *Editor*



Ready in April

NEW 2ND EDITION

ASIA'S LANDS AND PEOPLES

by GEORGE B. CRESSEY
Chairman, Department of Geography
Syracuse University

McGraw-Hill Series in Geography

Accepted in the original edition as the first really comprehensive volume dealing with Asiatic geography from an American viewpoint, *Asia's Lands and Peoples* has been fully revised in the second edition.

While the overall organization remains the same, much of the book has been rewritten in the light of the author's first-hand observation of Asia. Prominent changes include: 1) Post-war production figures 2) Separate chapters or rewritten material on new countries—Korea, Pakistan, Israel, Indonesia, etc. 3) 50% new and improved illustrations with nearly 100 new photographs 4) Corrected and redrawn maps, showing new boundaries and additional material.

Essentially a book of facts, it is also written with an understanding of the people and their national problems.

• • •

CHINA'S GEOGRAPHIC FOUNDATIONS. A Survey of the Land and Its People

By GEORGE B. CRESSEY. 436 pages, $5.50

This important book, the first to survey China by detailed geographic regions, presents an interpretation of the adjustments which the Chinese have made to their environment and portrays the varied characteristics of the cultural and physical landscape.

Send for a copy on approval

McGRAW-HILL BOOK COMPANY, Inc.
330 West 42nd Street New York 18, N.Y.

Mention the JOURNAL—It Assures Service

The JOURNAL *of* GEOGRAPHY

CONTENTS FOR FEBRUARY, 1951

The Role of Geography at the Mid-Century. By George H. T. Kimble 45

After serving with the British Naval Meteorological Service for over five years, Dr. Kimble became the first professor of geography and chairman of the department at McGill University. He later assumed the directorship of the Meteorological Observatory and the McGill Summer School of Geography. In June of 1950 he became executive director of the American Geographical Society. He is intensively interested in the educational phase of geography, and has lectured at the University College of Hull and the University of Reading, England, in addition to his services at McGill.

Testing with Pictures. By Irene Brockmyer 54

Miss Brockmyer is a fifth grade teacher at the Emsworth Building of the Avonworth Union School District, Allegheny County, Pennsylvania. She received her Master's Degree in geography at the University of Pittsburgh.

An Appreciation of the Puerto Ricans. By Luella N. Dambaugh .. 58

Dr. Dambaugh is an associate professor of geography at the University of Miami. She has published articles in both the JOURNAL OF GEOGRAPHY and the *Geographical Review* and has done extensive field work in the West Indies. This article is based in part upon her field work experiences.

Learning Readiness in Elementary Geography. By George T. Renner 65

Dr. Renner is a professor of geography at Teachers College, Columbia University. He has contributed numerous articles to educational, scientific and semi-popular magazines, and has authored or co-authored text books for all levels of instruction.

Three Pacific Northwest Dams. By Otis W. Freeman 75

Dr. Freeman is a professor of geography and head of the Department of Science and Mathematics at the Eastern Washington College of Education, Cheney. He is author, co-author and editor of numerous articles and books.

Report of the Thirty-sixth Meeting of the NCGT. By M. Melvina Svec 82

National Council at Work. By Loyal Durand, Jr. 86

Geographical Publications 87

Contents of the JOURNAL are indexed regularly in the *Educational Index to Periodicals.*

Authors alone are responsible for opinions and statements in the JOURNAL.

The JOURNAL *of* GEOGRAPHY

THOMAS FRANK BARTON, *Editor*
GEORGE J. MILLER, *Assistant Editor*
Indiana University, Bloomington, Indiana

Associate Editors

G. T. RENNER, Teachers College, Columbia University
CORA P. SLETTEN, State Teachers College, Mankato, Minnesota
EARL B. SHAW, State Teachers College, Worcester, Mass.
EDITH P. PARKER, University of Chicago
ZOE A. THRALLS, University of Pittsburgh, Pittsburgh, Pennsylvania
J. R. WHITAKER, George Peabody College for Teachers, Nashville, Tenn.
CLYDE F. KOHN, Northwestern University
OTIS W. FREEMAN, Eastern Washington College of Education, Cheney

National Council of Geography Teachers
HARRY O. LATHROP, *President,* Illinois State Normal University, Normal, Illinois
M. MELVINA SVEC, *Secretary,* State Teachers College, Oswego, New York

---

SUBSCRIPTION TERMS

The subscription price is $4.00 a year, payable in advance. The price of single copies is 50 cents. Postage prepaid on subscriptions from the United States, Canada, Canal Zone, Republic of Panama, Puerto Rico, Cuba, Virgin Islands of the United States, Dominican Republic, Philippines, Guam, Samoan Islands, Hawaii, Mexico, Costa Rica, Guatemala, Nicaragua, Republic of Honduras, Salvador, Argentina, Bolivia, Brazil, Colombia, Ecuador, Paraguay, Peru, Uruguay, Spain and Spanish Colonies. All other countries in the Postal Union add for postage 27¢ on annual subscriptions (total $4.27), on single copies 3¢ (total 53¢). All subscriptions are payable in United States Dollars.

The JOURNAL is the official organ of the National Council of Geography Teachers and is sent to all members. The annual dues, $4.00, are payable to the JOURNAL OF GEOGRAPHY. Extra postage rates for copies sent to foreign countries should be added to the membership dues. Make all remittances payable to the JOURNAL OF GEOGRAPHY, in postal or express money orders or bank drafts.

Send manuscript and books for notice or review to the *Editor.*
Send orders for back numbers to JOURNAL OF GEOGRAPHY.

Published monthly except June, July and August

PUBLICATION OFFICES: 450-454 AHNAIP STREET, MENASHA, WISCONSIN

Business Correspondence, Membership Dues, and Subscriptions may be sent to Publication office or to

A. J. NYSTROM AND COMPANY
PUBLISHERS, JOURNAL OF GEOGRAPHY
3333 ELSTON AVENUE, CHICAGO 18

Entered as second-class matter January 15, 1919 at the post office of Menasha, Wisconsin under the Act of March 3, 1879.

JOURNAL OF GEOGRAPHY PRIZES TO AUTHORS

Annually two prizes, of $25.00 each, are awarded for outstanding articles published in the JOURNAL in the previous five years. The prizes collectively cover most aspects of geography and geographic education. They honor the author and a person who contributed notably to the success of the JOURNAL. The prize awards are named in honor of the following: Richard E. Dodge, Ray H. Whitbeck, George J. Miller, J. Paul Goode, Almon E. Parkins, Ellsworth Huntington, Isaiah Bowman, and Cora P. Sletten.

The JOURNAL *of* GEOGRAPHY

Copyright 1951, by the National Council of Geography Teachers

VOLUME L FEBRUARY, 1951 NUMBER 2

THE ROLE OF GEOGRAPHY AT THE MID-CENTURY*

GEORGE H. T. KIMBLE
Director, American Geographical Society

History does not record the name of the man who first reflected that it was a small world. And where history is silent, it would ill become a geographer to speculate. But whatever its origin—whether it is as ancient as Noah (who must certainly have found Mt. Ararat rather cramped living quarters for so large and ill-assorted a population), or as modern as some mute inglorious Milton Berle, the saying has lost none of its topicality with the passing of the years. In the strictly physical sense, it was never more à propos than in our present age, when anybody can put a girdle round the world in 80 hours. How poor old Phineas Fogg must be feeling by this time not even Jules Verne could imagine. If things go on in this way, we will shortly find ourselves leaving Greenland after an early dinner, having lunch in Fairbanks and arriving in Vladivostok in time for a late breakfast, assuming, of course, that we are first allowed to *land* in Vladivostok! Even now, down in the islands of the South Pacific, you can read Australian newspapers the day *before* they are published in Sidney, N.S.W.—as if it isn't bad enough to read newspapers the day they *are* published. News certainly travels fast today! Almost as fast as gossip does across a college campus.

Indeed, in a very real sense, the airplane has made the whole world a campus. The only trouble is that its inhabitants have so far shown little sign of behaving in the nice neighbourly way students have of behaving! They fancy themselves better in the role of bosses than of brothers, and find it less strenuous to nag than to be neighbourly.

* Banquet address of National Council of Geography Teachers, Chicago, November, 1950.

The fact is, of course, that getting to know one's neighbours *is* a strenuous business. It takes more time, and it involves more mental effort than most folks are willing to expend. Having established a nodding acquaintance with a handful of them, including perhaps a Russian here, a couple of Germans there and a half a dozen Negroes elsewhere, they are apt to think they know all the answers. Henceforth all the 180,000,000 Russians in the world, all the eighty-odd million Germans, and all the Negroes are card-indexed in their minds under such smart but cynical captions as . . . well, ladies and gentlemen, you know them as well as I do!

But this sort of thing is simply not good enough. Before most of us can even begin to qualify as good neighbours of the two and a quarter billion human beings who from henceforth *are* our neighbours—and *near* neighbours at that—we will have to work our heads a great deal harder. We will have to spend a lot more time studying the lives they lead, the places they live in, and the aspirations and beliefs with which heredity, circumstance and environment have endowed them. For let us be assured of this: the Russian question, the German question, the Negro question—to say nothing of the other major issues of our time, will never be solved until *all* the peoples concerned know a whole lot more about such basic matters.

Contributions of Geography Teaching

It is precisely here, I believe, that the teacher of geography can make his contribution to the common weal, and for at least three reasons. In the *first* place, the teaching of geography promotes an awareness of the true nature of man's environment. For want of this far too many of our fellows are still treating the world as if it were a bank to be burgled. Until we come to treat it rather as a trust to be husbanded, we shall make little progress with the task of bringing the habitable part of it into a state of enduring fruitfulness. And certainly the world never needed to bring forth fruit more abundantly than it does today, with its population increasing at approximately the rate of 55,000 every twenty-four hours—more than 20,000,000 a year! I do not need to tell you how such an attitude can be cultivated. It can only be done by educating people in the fine art of environmental appreciation, by getting them to weigh objectively the pros and cons of their traditional land economy, by getting them to discern cause and effect relationships, and to so adjust that economy from time to time that it provides

them with a continuing livelihood and all the physical ingredients of a good life. We are fully aware, of course, that the geographer is not the only man who can assist in such a campaign, but with his understanding of the "interconnectedness" of land and life, he is peculiarly fitted for the task.

In the *second* place, and no less important, the teaching of geography provides us with an understanding of the differences between one environment and another. Environmental differences from place to place are real, and of incalculable economic and social importance, for "place" influences human endeavour, whether that place is large or small. Some people are more advantaged by their physical environment than others: there can be no doubt, for instance, that the Canadians, with two-thirds of their territory unsuited for field crop production, are less well served by their environment than Americans are by theirs. Others are only able to realize the advantages of their environment, and surmount its disadvantages, with greater effort or more time. Thus it has taken the people of Denmark one thousand years to bring their dairy farms to productivity levels reached by the people of Illinois, Indiana and Wisconsin in one hundred years. The recognition of these inequalities is not as general or as perceptive as it should be, but it is absolutely necessary if we are ever to understand the diversities of human economies and cultures, and the uneven timing of developments that lie at the root of so many of our international difficulties. Indeed, I would go further and say that in as far as the characteristic group attitudes and actions of human communities have a rational origin, the chances are that the rationality is more likely to be disclosed by viewing those attitudes and actions against the background of their unique environment (because no two nations, states or even tribes face identical sets of physical circumstances) than by any other line of approach.

Thirdly, geography supplies us with the techniques of mapping these differences, and of assessing realistically the adequacy, or inadequacy, of the environmental conditions of a given locality for the maintenance of a satisfactory life. In this age of growing social unrest and economic dislocation, a comprehensive spatial analysis of the circumstances of a people's way of living is, I believe, as essential to the furtherance of that people's way of living as accurate maps of terrain, lines of communication, military installations, airfields, ports and so on are to the furtherance of an army campaign. In no small measure, it was for lack of such analyses

that one farm in every three in the dry belt of Southern Alberta was abandoned between 1921 and 1926. On the other hand, it was the existence of such maps (notably, the maps of the Land Utilization Survey) that enabled Great Britain to expand its ploughland acreage in the early days of World War II by 60 per cent and to double its output of essential foodstuffs. But the geographer is able to do more than make such maps: he is also able to measure the human significance of the spatial differences which these maps reveal. In so doing, he is often able to identify the existence of maladjusted economies and stress-points where the cultural stability of an area, a state, or perhaps even a nation, may be threatened, and to indicate localities offering greater scope for commercial enterprise and land settlement.

Results of Geographic Study

And what do we really discover about this world of ours when we study it from this geographical point of view? I suggest that we discover four things—four very simple things, so simple perhaps that we do not think them worth talking about among ourselves, and in consequence, forget to talk about them to other people. If I seem to be stressing the obvious by enumerating them, forgive me: but the fact of the matter is that I am becoming increasingly concerned about the use (or non-use) of the opportunities we geographers have in this country of presenting our point of view (our confession of faith if you like) to those with whom we work and live—and it is *they* who, in the final analysis, mould public opinion and frame national policy. If there was ever a time when our problems (local, national and world-wide) cried aloud for a sympathetic insight into the nature of the bonds between man, land and the kind of society he builds on that land, it is now. The role of geography was never more relevant to the life of the community than it is today, and the need for a clear articulation of the things we profess and practice never greater.

So, then, to my four affirmations of geographical faith.

A Good World. In the *first* place, I believe that it is a mighty good world. In spite of all the man-handling it has had, and all the abuse, it still abounds in noble prospects and physical satisfactions —in things that are "pleasant to the sight and good for food." After more than 6,000 years of continuous cropping, the lands of the Nile Delta today support a denser population than ever before. The same is true of the Ganges Valley, and of the master streams

of China where many an irrigated area is annually coaxed into producing three separate and sizeable harvests. Scarcely less impressive is the record of the fenlands and polders of Western Europe, where, in spite of capricious weather and perennial drainage problems, farmers think nothing of threshing sixty to eighty bushels of wheat to the acre. The truth of the matter is that most of us are still a long way from realizing just *how* good the earth is. Even the deserts are good for something. I do not think it would be too difficult to show, for example, that without the so-called Arctic wastes, the climate of Chicago would be much less sunny than it is, and much less stimulating to mind and body. (You've probably noticed how stimulating it is today, for instance!) Similarly with the warm deserts of the world: have they not played a leading rôle in the evolution of those civilizations from which we draw our moral and spiritual standards? For myself, I believe that if we had but the wit to see it, we should find that the present division of the earth into hot and cold, dry and wet, is nothing like as wasteful (from the standpoint of population-supporting power) as some people suppose. Anyway, I'm all against letting the scientist tinker about with the climates of the "not-so-good" lands. For look at what's happening out in the West with this cloud-seeding business. Already the people of Nevada and Utah are in the throes of a minor civil war over the matter. The citizens of Reno, it seems, decided they would like to increase the snowfall on nearby Mt. Rose so that they could provide skiing and other snappy sports for the rich transients who get tired of playing the slot machines while the legal mills are grinding out their divorce papers. Apparently the snow-making device worked beautifully—so beautifully, in fact, that, according to the Mormons of Utah, the wicked Nevadans were dehydrating the moisture-bearing clouds that formerly swept on eastwards to the state of Utah. Righteous people that they are, the Mormons are determined to get their snow back. From the look of things when I was in Reno some months ago (perhaps I should say I wasn't there on business), the lawyers were so worried about the legal aspect of the case that they were beginning to think they'd be safer to stick to divorce, and that the Government would do well *not* to

> ". . . assume the fate of skies' estate."
> "For should Congress start to filibuster
> On when to clear and when to bluster,
> They'd still be at it in '59
> Half for rain, and half for shine."

World Honors Bond. My *second* belief is that this world of ours never fails to honor its bond. As men (and nations) sow, their children reap—even unto the third and fourth generations. Not every country has had such good "mortgagees" as those of the Nile Delta, the Ganges and the fenlands. The ancient cities of Assyria and Mesopotamia have become a habitation for jackals and a court for owls. Petra and Palmyra, Tyre and Sidon are but memories, while barely a battalion of cedars stands guard over the hills of Lebanon. Deforestation, over-grazing and improvident farming, ably abetted by a fickle climate, have wrought terrible judgments in those ancient lands. Similar orgies of deforestation marked the heyday of Greece and Rome, of the mediaeval Italian cities, and of Spain and Portugal—to the grievous impoverishment of succeeding generations. The same smash-and-grab mentality characterized the early immigrant into North America, with results that now discomfort even the most complacent among us. In the Union of South Africa, erosion has reached the proportions of a scourge. Dr. H. H. Bennett has recently affirmed that it is only a matter of twenty-five years before the Union will be forced to look upon its devastated lands as a national catastrophe. In Australia and New Zealand, the youngest of the new lands, the position is not much better. When I was in Auckland during the war it was periodically possible to write one's name in the dust that settled on the roofs. This dust a few days earlier had formed part of the highly fertile top soil of the wheat lands of Australia, fifteen hundred miles away. Unfortunately, there were no winds to blow it back!

Adequate World. With such experiences multiplying before our eyes almost daily, it is, I suppose, understandable that some men should be asking whether the good earth is any longer able to carry the burdens put upon her. This brings me to my *third* simple belief, namely, that it is still a very adequate world. I am aware, of course, that there are some who flatly say that it isn't, and who would have us believe that Nature is quitting the housekeeping business, that she is tired of patching up the scars of war, drought and exploitation, and that the world's cupboards will soon be bare. These prophets of gloom do not unduly depress me. True, there are areas where men no longer gather any harvest but weeds, but there are others (as in the Punjab, the Sudan and our own North American West) which once were desert, but now feed millions. And there are even larger areas—along the tropical and sub-temperate margins of our habitable earth which, thanks to modern technological

advances, may very well come to be numbered among the largest suppliers of agricultural and mineral raw materials. A single 7,000-acre farm, if operated in a warm climate, would, they say, produce annually enough yeast to supply 2,500,000 people with their optimum fat requirements. To produce the same amount on a good fertile soil would require no less than 175,000 acres: in other words, a 7,000-acre "tank farm" would release 168,000 acres of land for other productive purposes! (Of course, there's always the question whether you could get people to eat the stuff. For myself, I'm prepared to believe that the advertising companies handling such things as chewing gum, toilet soap and "Coca-Cola" could be relied upon to put the idea over!)

Taking the world as a whole, it is difficult to see what reason there can be for doubting that there is still enough real wealth to go around. But alas, we do not yet seem to know just how to handle "the world as a whole."

World Hangs Together. Which brings me to my *fourth* conviction about this earth of ours, namely, that it all hangs together. There is nothing "small town" about the way Dame Nature goes about her business. When she hands out her favours it is with a sublime disregard of national boundaries or military requirements. She recognises no parts within the whole. No single country, or part of a country, has been given all the ingredients of the good life—not even Florida! If the experience of the past generation is any guide, local self-sufficiency (or national self-sufficiency for that matter) is no prescription for a society in search of health and prosperity. For 80,000,000 Germans it meant ersatz tea (apple peel), ersatz coffee (acorns), ersatz wool (pulp), ersatz bread (sawdust and potatoes) and genuine stomach ulcers!

And just as she disburses her favours irrespective of the merits of individual races, empires and religions, so with Nature's punishments. Her floods, droughts and dust storms display the greatest possible contempt for manmade divisions: they show no greater regard for the just than the unjust. On this continent none, I venture to think, have realised this better than the men who brought the T.V.A. into being. The stripping of the water-shed region of the Tennessee Valley set in motion a train of consequences that reached to the very delta of the Mississippi. The heavy annual loss, thru flooding, of life and property in those fertile lowlands, the equally serious damage done to road and railway services thruout the length and breadth of the valley, the silting up of the riverbed,

and the consequent decline of water transportation, were but a few of the more obvious by-products of the exploitative process. Nor do we need to go as far afield as the Tennessee Valley, for has not the land of the Corn Belt provided us with some powerful reminders of the truth that "if one member suffers, all the members suffer with it."

But I believe the Good Book is equally right when it goes on to say that "if one member be honoured, all the members rejoice with it," for if recent land rehabilitation schemes have shown one thing more clearly than another, it is that the results of a multi-purpose scientific assault upon an environment that has got out of hand are not limited to the physical boundaries of the area concerned. Their horizons extend to the uttermost parts of the earth. The architects, the engineers, the land use experts and the geographers who planned the strategy of the T.V.A. fifteen years ago, today have the satisfaction of knowing that they not only saved the Tennessee Valley from physical and cultural ruin, that they have reduced the flood hazard to cities 1,000 to 1,500 miles downstream, and that they have brought to the region a level of prosperity which it had never previously experienced; but also that they have established a pattern of good living for peoples in other parts of North America, and, indeed, in other continents. In India, for example, water-power and irrigation schemes are now under way in the Mahanadi and Ganges Valleys that will affect an area much larger than the Tennessee Valley and transform the economic circumstances and outlook of a population three to four times that of the entire Dominion of Canada. In the Nile Valley, an equally ambitious scheme is now being launched under the joint auspices of Egypt and the British Commonwealth. In an otherwise rather cheerless world, is it not a matter for congratulation that more and more politicians, scientists and ordinary folk are coming to see the compelling need for cooperative, nation-wide and, if need be, supranational projects, and, better still, that they are beginning to pool their resources in furtherance of them? As educators, our role here is perfectly plain. We should canalize all our energies and mobilize all our powers of persuasion (and if need be of insinuation and subterfuge) to see that all such projects are planned, directed and carried thru with the help of the best available geographical intelligence, and the fullest possible realization of the spatial problems involved.

Please do not mistake me, tho. I am far from saying that the

only thing we need to make us better neighbors is better planning, more T.V.A.'s, more technology, or even more geography.

THE ETHICAL AND SPIRITUAL PROBLEM

The best informed people are not always the nicest to live with. (There never were before in the history of the world so many people who knew so much about so many things, yet I do not observe that the divorce rate among these clever people is conspicuously lower than it is among other classes of society.) I do not believe it is more knowledge we need, so much as more understanding and more unselfishness. For the biggest problems of our time are not physical or material, but ethical and spiritual. One of the biggest problems of all, I submit, is to turn getters into givers. If we continue to admit no standard of life except that each man shall desire more than he has so far obtained, then there is little hope of peace at home, and none of peace on a world scale. "The social problem of the modern world," says Walter Lippmann, "arises not out of the objective difficulty of providing an adequate material existence (we geographers could have told him there is no real problem here), but out of men's subjective expectations which, because they are unlimited and insatiable, cause violence, inequality, hatred and frustration." Such is the progeny of greed—of the principle of "Every man for himself, and the Devil take the hindmost."

But how to turn getters into givers? It would be foolish to suppose it could be done by any simple pump-priming operation—by everybody getting a *little* more so that they could start giving a *lot* more. Those who have gathered great riches have not always been great philanthropists. Let us have more education, you say. By all means. Many of us would like to see "an education that educated man's humanity, rather than one that indulged his individuality"; one that offered students "the habitual vision of greatness," and concerned itself less with esoteric specialisms, low in community worth, and with small fractions of human interest and experience, and more with values that are independent of time and place.

But is the formulation of new intellectual standards and new educational policies going to be enough? If I may conclude by stating my own personal conviction, it is that the realisation of the things for which we geographers stand calls as much for a change of heart as for a change of thought. The Chancellor of a great

American university underlined this in a speech of his when he spoke of the need for cultivating "a deep sense of our own unimportance and a deep conviction of the importance of others." So far history has given absolutely no assurance that that sense and that conviction can be sustained by purely material, or intellectual considerations. If we want world peace that will last, and a world community (and on purely geographical grounds, the world is now small enough, and knit closely enough, to make such a community possible), we need the inspiration and support of religious faith—the kind of faith that constrains men to pass their time not being ministered unto, but ministering, and giving their lives to the service of their fellows. Fortified by such a faith, I believe, ladies and gentlemen, that we geographers could yet live to see the day when, in the words of Tennyson,

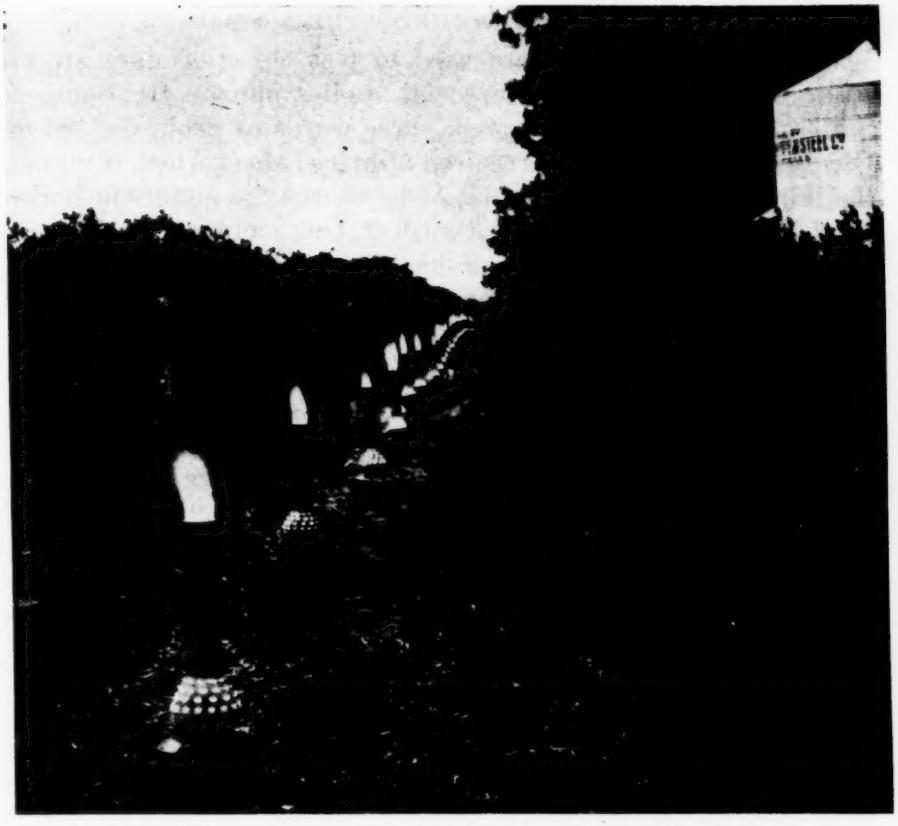
> "They that dwell apart shall know each other,
> And understand the utterance of a brother,
> In every tongue and tone."

TESTING WITH PICTURES

IRENE BROCKMYER
Avonworth Schools, Allegheny County, Pennsylvania

A picture test at the conclusion of a unit in geography may be used to "streamline" the checking of strengths, weaknesses, and understandings. When one is trying to clarify his thinking regarding the intellectual, emotional, physical, and social gains which individual pupils have made during a unit of work, the time consumed in correcting the usual type of test may be completely out of proportion to its importance. As economy of time is provided by the use of visual aids in instruction so pictures may save a teacher's time in correcting tests. Too often, units which start off democratically under teacher-pupil planning and proceed with cooperative discussion and dynamic activities, are terminated with a "horse-and-buggy" test. Marking such a test requires so much teacher time that the pupil's interest in measuring his own growth is completely lost because he's probably well along in a new unit of study before his paper is returned to him. Let us consider how to build a picture test, its advantages, and possibilities.

The ideal picture test could scarcely be compiled by anyone except the classroom teacher—only he has witnessed the unit from



In which state was this picture taken? North Carolina, Florida, Arkansas.

beginning to end. When he first states to himself the objectives, the major understandings, the skills, etc., which he hopes that a proposed unit of study will cover, he begins to set aside pictures which would portray such items. As the lure is cast and the class (by devious means) is baited and led to propose the investigation of the "new" topic, class members will suggest various subjects for examination and means of carrying out this research. While this may take a completely different path from the one which the teacher had in mind he quickly adapts his pre-planning to salvage the most essential items and re-considers his need for pictures. As the unit of study proceeds with its group activities, individual reports, class work in developing skills, etc., the teacher is always spotlighting his major objectives and seeking pictures to show them. When the unit is completed he must produce a test which will measure growth in knowledge and understanding.

PICTURE TEST ON THE SOUTHERN STATES

Thirty-two pictures were used to test objective data after a fifth grade had completed a social studies unit on the Southern States. Under each picture were three words or groups of words. (See picture). Each child received a dittoed sheet which contained the thirty-two groups of words. As he viewed the picture he underlined his choice for the correct answer. One picture which showed the winding course of a river had the caption "delta-meander-source." Since one important measurement of growth in a subject field is determined by the ability to handle the vocabulary, several pictures of this type were used quite successfully. Steps in growing cotton ("seeding—chopping out—picking"), processes in manufacturing cloth ("spinning—carding—weaving"), and association of types of structures with industries (steel mill—oil refinery—paper mill") are just a few examples. Identification of crops was required on a picture marked "sorghum—alfalfa—tobacco" which showed a wagon unloading what was obviously a cane crop. If a social studies unit has been at all successful some fifth graders should have lived realistically and vicariously enough in an environment remote from their immediate surroundings that they could project themselves into pictures. As they looked at cotton pickers harvesting a large crop they had to know whether it was "April—July—September." An even sharper test of this ability was the picture marked "Florida" which showed an enormous crop of string beans for which he had to select a title from "February—July—August." To test his knowledge of famous people associated with an industry there were the magnified pictures of a boll weevil astride a cotton boll ("L. Pasteur—G. W. Carver—R. Koch"), and the names "Henry Ford—Thomas Jefferson—Eli Whitney" under a picture of an early model of the cotton gin. The pupil's recognition of the relationship between the success of an enterprise and the type of dwelling the worker might inhabit was easily seen when he selected "poor soil" instead of "fertile soil" or "cheap transportation" when he viewed a ramshackle share-cropper's cabin with an even poorer-looking share-cropper. Outline maps such as the one of Florida with a dot near the southeastern tip and the caption "Tallahassee—Jacksonville—Miami" showed how closely he had observed the location of important cities. A picture test is limited only by the quality of the teacher's picture collection and one becomes much more aggressive in securing pictures after he has made one such test.

PUPIL AND TEACHER REACTION

A picture test appeals to the pupil. It is easy to work, rapid to check, and gives him an opportunity to correct wrong impressions quickly. The most pertinent questions of the entire Southern States unit were asked and answered by pupils as they viewed the pictures again while they looked at their corrected papers. If a child had failed to identify the crop as tobacco in a picture of a tobacco-drying shed marked "curing—cropping—carding" or to recognize the oil-tanker captioned "cotton—petroleum—citrus fruits" his classmates gave him not only the correct answer but recalled previous associations with the items. A ten-year-old's disgust with himself for writing "July" instead of "February" for Florida's bumper string bean crop is quite eloquent.

The greatest value of the picture test to the writer has been its revelation of the seeds which "fell upon rocky places, where they had not much earth, and straightway, they sprang up, because they had no deepness of earth; and when the sun was risen, they were scorched; and because they had no root, they withered away." When eighteen out of twenty-three pupils chose "communication" or "agriculture" instead of "transportation" for the picture of an oil pipe line being laid, time was taken out while terms were clarified. If a class doesn't know something, pictures almost always tell you with rather embarrassing frankness. There are gratifying results, too, which are equally plain and which make the construction of a picture test well worth the effort.

AN APPRECIATION OF THE PUERTO RICANS

LUELLA N. DAMBAUGH
University of Miami

So much has been written recently about the regional and economic geography of Puerto Rico, and very appropriately too, that I would like to strike off on a different vein, namely, an appreciation for what the Puerto Ricans are doing to solve their own problems.

Travel Easy and Pleasant

In traveling thru Puerto Rico during the Christmas holidays of 1949, even tho time permitted only a reconnaissance survey, it was possible to get a cross section of the social and economic conditions along the highways and byways.* The good, paved roads that interlace the island from one end to the other make travel easy and pleasant. The roadways are neat and well kept, and so are the city streets (Fig. 1). In many places royal poinciannas line both sides of the highway. Hedges and crotons eight to ten feet high, along with the endless expanses of beautiful sugarcane, add to the beauty. The panoramas of cultivated fields, breath-taking mountain vistas, and the varieties of natural vegetation make it very difficult for one to keep from going just plain tourist in this beautiful island.

A distinct and significant feature in the landscape is the water taps placed at intervals along the highways. These supply water for household purposes. Health conditions are better by far in Puerto Rico than in neighboring islands. The broad rivers, ditches and canals were frequented by women doing the family wash and the children splashing about in the water (Fig. 2).

Groups of costumed school children accompanied by their teachers were encountered from time to time parading around the village squares singing Christmas carols. They stopped every now and then to extend a special greeting to the shop keeper or to the passersby. The universality of their Christmas spirit would have to be experienced to be appreciated, for even the remotest

* During ten days over the Christmas holidays, Dr. Dambaugh conducted a two-credit course in geography in Puerto Rico. The group covered practically all regions in the island, making a reconnaissance survey of land utilization in the rural as well as the urban area. This paper does not review nor summarize the work carried out, it is merely a clinching of the impressions that one might acquire from contact with these friendly and courteous peoples.

mountain homes were decorated for the occasion. In a little town in the interior, Cayey to be exact, we got into a traffic jam just as one of these groups approached. There were about eight or ten alert children and their teacher who peered into the car window and extended to us the holiday greeting.

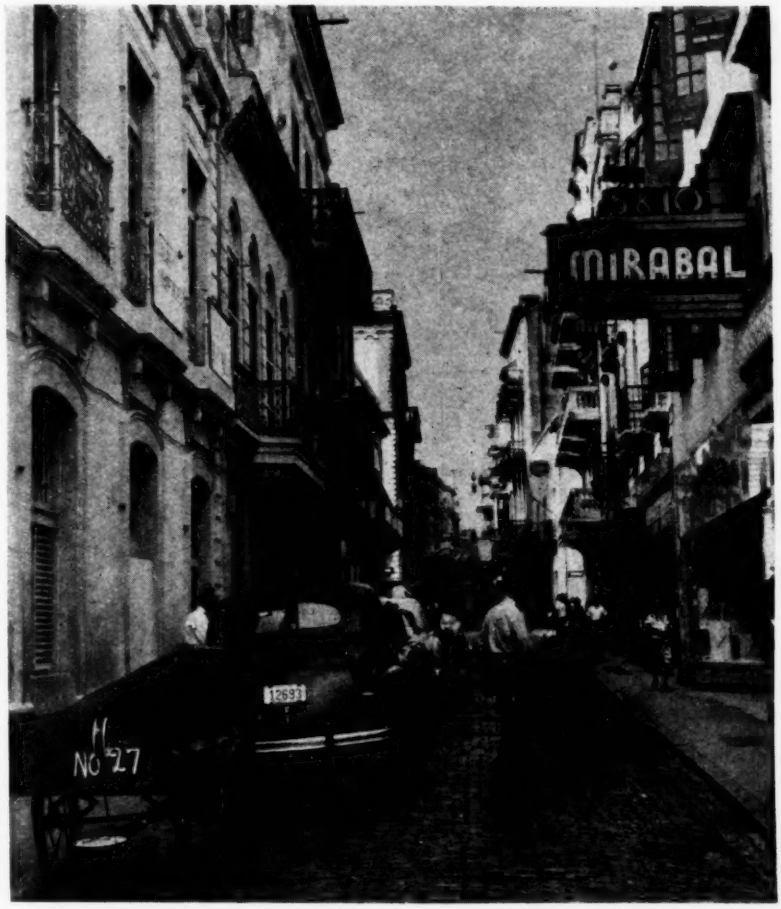


FIG. 1. Streets in the older sections of San Juan retain their distinctive Spanish colonial flavor with wrought iron grills and balconies, and cobblestone streets. The cleanliness of the streets is a distinctive feature not only of San Juan, but also of other urban areas. (Courtesy Pan American World Airways System).

There comes to mind also the groups of men standing on street corners. They made the finding of a route very easy, for there are no road signs in the island. Nor billboards either. Thank heavens! When it was necessary to stop and ask a direction, not one, but

FIG. 2. Women washing clothes in a stream. (Courtesy of Government of Puerto Rico.)

sometimes two or three natives tried to give the directions all at the same time. There was one instance in which one of the fellows used his elbows to push the others aside in order that he might be heard. One cannot help but feel kindly toward the *jíbaros* and respect their alertness and helpfulness.

The home of the *jíbaro* is a small frame house, elevated above ground on piling. Some may be thatched. They cling in many places to such precipitous slopes that one almost questions the ingenuity of the builders, and may be a bit envious of the sites chosen, especially those that overlooked the beautiful, rolling terrain. There are slums too, many of them. There is a small one within the throes of El Morrow, and another near the docks in the harbor of San Juan. The Fanguito has been given undue publicity because it is by no means San Juan any more than Harlem is New York. Every Puerto Rican is apologetic for such conditions. And especially, do they not want outsiders to consider these areas, nor the naked children, as typical or characteristic of Puerto Rico.

PEOPLE COURTEOUS AND COOPERATIVE

The *jíbaro* and his children carry many of their needs on the backs of donkeys, in push carts, or even on their heads. A small girl, possibly ten years old, was carrying a box about two by two feet square on her head. A lad even younger had a burlap sack filled with old pieces of boards about two or three feet long on his head. Both were willing to pose for a picture. The *jíbaro,* riding his donkey, with sacks of grass tied on either side of the animal, was equally as courteous. Young and old, male and female, rural dwellers and city workers alike carry packages on their heads **(Fig. 3).**

There were stops at several of the Agricultural Extension Stations in Caguas, Cayey and Coamo. The agents in charge received the group with utmost courtesy. They went into great detail to explain their objectives and the methods they were employing to reach the farmers with functional scientific knowledge. One agent in particular showed profound knowledge of the Puerto Rican problems pertaining to erosion, the monocultural economy and the rapidly growing population. The group was much surprised to learn that this gentleman had never been out of the island, yet his viewpoint was one that he might have acquired at any one of a half-dozen continental universities. The agents expressed their

FIG. 3. Unloading pineapples near Vega Baja, Puerto Rico. (Courtesy of Government of Puerto Rico.)

gratitude for our visit thru gifts of candy, copies of the mimeographed literature they were distributing to their peoples, and a cool, refreshing drink of *champolo de guanábana.* And, it was delicious!

At the *Escuela de Artes Industriales,* largest vocational school in the world—a part of the University of Puerto Rico—the director personally escorted us thru the shops, allowing plenty of time to inspect the projects being made. He had designed the administration building himself. He, too, acquired his vast knowledge of vocational ideas in Puerto Rico. I might add also, that the quality of work turned out was of the highest. The school graduated its first class in June, 1950. These young men will play a major rôle in the growing industrialization of the island, and perhaps more so in other Latin American countries than the graduates of vocational schools on the continent for they have the advantage of being bilingual.

INDUSTRIES EFFICIENTLY MANAGED

On a tour of the industrialized areas in metropolitan San Juan we were accompanied by a member of the staff of the Industrial Development Company. It was a surprise to have the manager of the Cement Plant hand out mimeographed data on the details of the industry, in addition to his explanation of the progress made by the plant under the supervision of the IDC. The glass plant, the yeast plant, and the textile mill likewise were under the supervision of individuals who were enthusiastic over Puerto Rico's achievements industrially, and who realized the value of the labor pool that is anxious and willing to work in industry. This day's tour ended with a visit to the offices of the IDC. Various members of the staff reiterated Puerto Rico's ambitions to industrialize and thus diversify the economy. Most of these men had higher degrees from continental universities. The day was climaxed with the showing of a film summarizing Puerto Rico's industrial achievements. The film positively would have seemed futuristic, rather than realistic, if the industrial plants had not been visited first.

And, by all means, the Captain of the Port should be mentioned. Here again, in answer to our munificent questions about the character of the harbors of San Juan, Ponce, and Mayaquez, he pressed into our hands a document which contained the specific geographic details of the harbor facilities of the island. Next, he

took us on a trip thru the harbor on his private launch in order that we might see for ourselves one of the cleanest harbors in the world, in which he took a great deal of pride, and was justified in doing so.

The Puerto Ricans love their island. This is mirrored in the neatness and tidiness of the countryside. They are aware of their problems: the growing numbers of people in an area with definite physical limits, the low level of living, the system of land tenure in which large estates still hold most of the land, the problem of soil erosion, the unemployment and underemployment so typical of a monocultural economy that depends on a perennial crop as a cash crop, the limited variety of mineral resources, and the large and growing labor pool that must be trained to man industry and farm scientifically. None-the-less they know the favorable factors also: the large number of people in the most productive age group, their capacity and willingness to learn new ways of earning a living other than by agriculture, the vast hydroelectric power resources, the large, roomy San Juan harbor, the tropical marine climate, the excellent road net, their belief in their leaders, and the profound sympathy and understanding on the part of those leaders that they have the knowledge and ingenuity to solve their problems. I feel confident that the realistic viewpoint of the Puerto Ricans will dovetail into the Point Four Program of the United States and the two attitudes will merge with time in a rational solution of the basic problem of the island—too many people on too little land.

LEARNING READINESS IN ELEMENTARY GEOGRAPHY*

GEORGE T. RENNER
Teachers College, Columbia University

At no time since the day of Arnold Guyot has geography been in such a precarious position in American education as at present. It has almost disappeared from the secondary schools and is rapidly losing ground at the elementary level.[1] American geographers manifest a tendency to blame others for this condition, and a lamentable lack of any willingness to assume any of the blame themselves.

Culpable as geographers may be for certain aspects of the situation now facing geography in the public schools, it must be said that a considerable part of it is the result of a long-time trend in the development of American education. This trend has revealed itself in the growth and emergence of an isolationist national philosophy, wherein geography (which leads to an internationalist point of view) was weakened, whilst history (which can be readily perverted into "patrioteering" and the manufacturing of a great national tradition) was enhanced. Eventually, this trend enabled one group of historians in the United States to convince American education that history be the *substance* of social science, rather than merely the *interpretive record* of social science.

In part, therefore, the decline of geography has been owing to the unwarranted encroachment of history,[2] but in greater part it has resulted from the geographers' own neglect of certain educational aspects of their subject. One of the more important of these neglected aspects is the matter of the *learning readiness* of children at the elementary level. Not many years ago comparatively little was known about human learning, but enough evidence is now at hand to show conclusively that the speed and thoroness with which logical material such as geography can be mastered depends upon the percentage of already-familiar elements present in any

* This paper was presented at the meetings of the National Council of Geography Teachers, Chicago, November, 1950.

[1] Geography's seemingly thriving status in higher education is more apparent than real, because it cannot long be maintained without a strong foundation in the elementary and secondary schools.

[2] History has unfortunately also weakened itself in the process of encroachment. It would today be in a much sounder position educationally, had it chosen to grow with, rather than at the expense of, geography.

new learning situation.[3] In the light of this fact, *learning readiness* may be defined as the child's receptivity to certain new facts and concepts produced by his prior possession of tool-skills, understood-facts, and insights which make learning not only possible but easy.[4]

Any doubt which may exist regarding the reality of this relation between readiness and learning on the part of the child, will be quickly dispelled by the following example drawn from the field of adult learning, where one would expect it to be much weaker than for less mature people.

Early in 1941, before the attack on Pearl Harbor, the writer prepared an article for a popular magazine, listing the principle politico-geographic changes needed over the earth in order to render peace possible.[5] The purpose of this article was two-fold:

1. To attempt a bit of adult education in geography.
2. To determine how much popular readiness for geographic learning exists in the United States.

Among many points proposed, the article suggested that Korea be tied politically to a democratically reconstituted Japan; that Hindustan and Pakistan be separated; that Indonesia be taken out of Dutch hands; that the two parts of Azerbaijan be united; and that Germany, Austria, and Hungary be democratized and put under one government. Because Americans, for all their high level of education, have never been taught enough geography to be able to evaluate a simple piece of geographic thinking when it was presented, there was immediate and very vocal resistance from many parts of the nation. The arguments advanced against the article showed plainly that the American people had been so conditioned to believe that historical and institutional factors constitute the only valid bases for reasoning and debate, and that any discussion based upon geographical considerations seemed not only strange but somehow immoral. A few prominent newspaper columnists even went so far as to try to demolish geographical realities with purely historical or ideological arguments—completely oblivious to the obvious fact that historical considerations are often spurious, but

[3] A. I. Gates, A. T. Jersild, T. R. McConnell, and R. C. Challman, *Educational Psychology*, Third Edition, 1948, Macmillan, N.Y., p. 355.

[4] This facilitation arises out of these elements being anterior to, or actual components in, the new materials to be learned.

[5] George T. Renner, "Maps for a New World," *Collier's*, June 6, 1942, Vol. 109, No. 23, pp. 14-16, 28.

that geographical considerations, if correctly interpreted, possess innate or inherent validity. Subsequent events to date have not, of course, discredited a single one of the points suggested in the article; many of them are actually supported by recent events. Indeed, the United States Government would now be very happy if some of these suggestions had been carried out early enough to have avoided bloodshed and political strife. The article in question holds what is probably the record for any magazine article ever published in America in stirring up public discussion.[6] All of this is unimportant except as it shows how low a degree of readiness for geographic learning exists in the minds of the adult American public. If this be true for adults then it need not be argued very forcefully that readiness or unreadiness on the part of children for learning is probably the most important consideration pertaining to elementary geography.

WEAKNESSES IN THE PRESENT GEOGRAPHY PROGRAM

The fact that geographers have paid scant attention to the factor of learning readiness suggests that they themselves may be to blame for many of the present difficulties now besetting elementary geography. These difficulties in general seem to center about the following five weaknesses in the geography program.

1. Geography is present in so few of the public school years that it has been severely telescoped. This has made it mostly factual rather than explanatory.

2. In many instances, difficult concepts have been dressed up in short words and simple sentence structures, so that they could be taught to children far too young to understand them.

3. The study of maps, globes, and other tools is begun before the things which they represent can be understood.

4. The advocates of geography have attempted to escape curricular encroachment by moving downward into the primary grades so that content has often been so simplified as to be meaningless or even misleading.

5. In order to avoid overstuffing, some courses of study have resorted to the teaching of geography through projects, activities, and units, which process destroys all the continuity of geographic study and prevents any grading of materials as regards learning difficulty.

IMPLICATIONS OF PRESENT WEAKNESSES

The five weaknesses just listed are collectively so serious and have given rise to so many educational mistakes that they merit careful examination.

[6] Even a few university geographers (altho none who were at all grounded in educational psychology) were unable to identify the underlying reason for the clamor, and became fearful lest it affect their own academic security.

Factualism. The results of telescoping the study of geography so severely that it has become a heavily factual subject, are extremely serious. Any subject which becomes overloaded with facts runs the risk of underemphasizing meanings and thereby losing its educational significance. In the face of this truth, books overly full of facts are even now being produced for third, fourth, and fifth-grade children. Such books are not only pernicious, they are unnecessary as well. In this connection, it should not be necessary to be reminded that geography is actually *on the earth* and *not in books,* anyway. Accordingly, every lesson in elementary geography *begins in the local environment,* and *ends in the local environment;* any other premise leads to very bad educational procedures.

False Simplification. The common attempt to simplify difficult concepts by setting them in simple words and boiled-down, synoptic narrative, raises the question as to what sort of geography is *elementary* and what sort is *advanced.*

This is not a new question; indeed, years ago, Henry Johnson, a teacher of history raised the same query regarding his own subject. He concluded that any kind of history is elementary if it be presented concretely and described in full and graphic verbal terms.[7] This tends to be as true in many respects for geography as for history. Therefore, measured by Johnson's criteria, much of what is now taught in the early grades must be rated as advanced rather than elementary geography. As pointed out by two Canadian educators, "Geography is not the study of the earth nor of man but of the relationship between the two."[8] Relationships, however, are abstractions, and geographical abstractions are, by Johnson's definition, advanced geography. Consequently, facts have usually been substituted for relationships, which means that real geography has largely been replaced in the lower grades by spurious geography.

Tools Without Understanding. The use of difficult tools without realization of how difficult they are or how much instruction in their use is needed, is an especially mischievous practice. It is doubly so because it is overlain by certain fallacies which look like obvious truths. For instance, Johnson writes, "Children can begin to find places on maps as soon as they have learned to read. They

[7] Henry Johnson, *The Teaching of History,* Revised Edition 1945, Macmillan, N.Y. p. 103.

[8] H. F. Munro and H. P. Moffatt, "The Schools and International Understanding in Canada." *N.S.S.E., 36th Yearbook.* Part II, Bloomington, Ill., 1937, p. 262.

can begin to use a scale of miles as soon as they have learned to count.''[9]

Such an assumption, however, can and usually does lead to pedagogical error. Scale and ratio are forms of arithmetical proportion; latitude and longitude are matters of solid geometry. Even the basic facts about a map projection require both plane geometry and simple analytics for their understanding. Therefore, to expect third, fourth, or fifth grade children to use the map, in any adult sense of that term, is folly. Children are adept at verbalizing, and soon become expert at giving back the external form of what the teacher expects from them. Much of this is so skillfully done that it remains undiscovered and uncorrected even in the adult. For instance in the summer of 1932, the writer mimeographed maps of the United States showing state boundaries, for a class of approximately 100 social-studies teachers at a Midwestern state university. One-third of these maps were printed upside down, another third were reversed from east to west, and the final third were printed in correct position. These three types of maps were distributed to the members of this class in rotational sequence with instructions to write in the names of the states. Nearly one fourth of all these teachers proceeded to write Maine in the upper right hand corner, regardless of whether the outline of Maine, Florida, or Washington was actually represented there. If adult teachers exhibit such lack of readiness to use maps, one cannot assume *a priori* readiness in children.

After 1941, the azimuthal map projection of the world centered on the North Pole came into general use for depicting what usually was referred to as ''air-age'' relations. Eventually, this design of a North-Pole-centered map of the earth was traced upon the flag of the new United Nations organization, whereupon it soon became a familiar object to the eye of nearly every civilized person on earth. Despite this, a few days ago a social studies teacher from Philadelphia said to the writer, ''I think the 'polar' map is interesting but I still prefer the map of the world as it really is—you know—the one with square coordinates.'' If this be true for an adult teacher of social studies, then it would seem to be folly to try to teach very young children to use maps in any very discerning manner. At most, they might be taught to use the coordinates on a map as a gross device for finding places, in much the same way

[9] Henry Johnson, *Op. cit.*, p. 102.

that they might employ the wire mesh on a screen door for locating a fly.

Too Early Introduction of Geography. It is well known that a large part of geographic learning turns upon the space concept. As a consequence, the shunting of geography downward into the primary and early elementary grades, runs abruptly into the fact that the space sense of young children is very rudimentary and is, therefore, inadequate to support much geographic learning in the lower grades. Regional studies are generally acknowledged to be the core of geography. Regionalism is, however, for the most part merely geographic relationship arranged in spatial terms. Hence, by definition it is largely beyond the comprehension of young children with their rudimentary space sense. The common practice, therefore, of teaching regional geography in grades four, five, and six (or perhaps only grades five and six) is for the most part intellectually unfruitful. Even where such a program extends upward into the seventh grade there are still at least three major evil results of this practice.

First, since there is not time enough to teach all the earth's regions, only the most striking and eccentric (that is, the atypical) are selected, and hence the child gains the idea that the world is much more bizarre than it really is. This is aggravated by the common tendency to aid the child's memory by describing regions and countries in bizarre, easily remembered terms, and thereby speciously emphasizing differences rather than similarities among peoples. Second, because the available time is so limited, it is impossible to teach all or even many regions thoroly, and they are therefore customarily lumped together into continents and hemispheres and taught by groups. This overemphasizes the separateness of continents and hemispheres and gives most Americans a false sense of their nation's physical isolation in the world. Third, much of the regional treatment is so hurried and superficial that it consists largely of generalizations. Needless to say such generalizations are largely spurious.

To understand a region requires a large degree of learning readiness. This latter consists of prior possession of an orderly knowledge of the materials, motivations, and institutions of the human culture on the one hand and of a working familiarity with the materials, processes, and patterns of the natural environment on the other hand. Since his pupils lack all these things, the teacher

casts about for anything which will characterize or describe the region under consideration in rememberable terms. Under such handling, Holland becomes a region (sic) of wooden shoes, windmills, and tulips; Mexico emerges as a region (sic) of sombreros, serapes, and revolutions. Eskimos are pictured as living in snow houses; the tropical forests glibly become jungles (sic) full of tigers. Since neither time nor techniques exist for developing real understandings, specious explanations are resorted to. Tibetans consequently practice odd customs because they live on a plateau. Mexico is backward and illiterate because of an "unfavorable" climate. The Dutch are clean and thrifty because they live near the sea and have many canals. The Balkan peoples are unruly and quarrelsome because they inhabit rugged hill country. This teaching of so-called regional geography, in disregard of the basic principles of ecological relationship, results in geographic determinism of a kind not held by any geographer since the days of Ritter and Ratzel, if indeed even they inclined toward such views.

In all such studies the United States is allotted much more time than any other country. Moreover, it is "patriotically" presented in a much better light than are other lands. As a result, pupils are unconsciously led to think that the United States is much more important than it actually is. Even worse, they are usually made frankly contemptuous of many of the other peoples of the earth. Real understanding of geographical concepts would require the introduction and evaluation of the cultural-heritage factor, of the relation of socio-economic progress to geographical location, and of the obvious differences between industrial and pre-industrial cultures.

When unfavorable and unwarranted comparisons between industrial United States and certain pre-industrial peoples are made it is bad enough, but when they are made between the United States and other powerful nations it is dangerous. Teaching past generations of American children that Japan was a land of paper houses, cherry festivals, plum rains, and near-sighted imitators of Western culture brought the United States near national ruin during the Second World War.

The current failure of the American schools to teach the immense resources, industrial strength, or the social and economic achievements of the Soviet Union, or the appeal which its program has for the pre-industrial peoples of Asia and eastern Europe,

may eventually prove to be a national disaster for the American people.[10] American failure to teach today the facts about Russian life against the background of environmental factors which renders them explicable and reasonable, will certainly prevent tomorrow's citizens from understanding world problems. And without popular ability to understand world problems, all dreams of "One World" will collapse in strife and disaster.[11]

Lack of Continuity or Sequence. The substitution of isolated fragments for the connected whole of geography has produced several serious results. Actually, there is nothing necessarily wrong with the theory behind such a procedure, but in practice it requires, in order to succeed, either insight and perspective to a degree possessed by few teachers, or else informed supervisors of a kind almost never available. As a consequence, an already poor program frequently collapses into a series of disjointed fragments without continuity or sequence.

It is this sort of inchoate program which prompted a well-known professor of social science to tell an audience of teachers recently that, "The pupil can gain all the geographical concepts that he needs, thru the study of history." In actual fact, it might be possible for a pupil to obtain all or most of the *place locations* needed, thru the study of history, but it is extremely unlikely that he would gain any real *geographical concepts*. The acquisition of these latter is a matter requiring an extended process of learning wherein a great many factors, some of them of considerable complexity, are involved. To achieve anything approaching effective learning, these should be graded as to difficulty and presented to the child in their order of ascending difficulty. To accomplish this, the geographic educator is again driven back to a consideration of the question of learning readiness in the child.

Basic Facts About Geographic Learning

During the past several years, the writer has had several doctoral students engaged in studying children's learning in relation to certain geographical terms and concepts used in the social studies. A number of facts have already come to light which are significant to say the least, for example:

[10] M. L. Walters, "Developing Geographic Understandings," *Teachers Service Bulletin in Geography*, Vol. III, No. 4, April 1950, Macmillan, N.Y.

[11] George T. Renner, "The Baby That Became a Giant—Geography," *Michigan Education Journal*, Vol. XXVII, No. 3, Oct. 1950, pp. 174-176.

1. Fifth and sixth grade pupils use glibly such terms as:

   Industrial country
   Big Four Nations
   International port
   Tariff

   and yet upon investigation only a tiny percentage of the pupils can give anything approaching a correct definition of such terms.

2. Less than ten per cent of sixth and seventh grade children can define such concepts as:

   nation
   country
   democracy
   colony

3. Only a tiny fraction of eighth grade classes can distinguish between areal magnitudes represented by such words as:

   hemisphere
   continent
   country
   state
   region
   district
   place

4. It should also be noted that teachers in social studies classes often attempt to teach such things as *angles, arcs,* and *degrees* earlier in the educative process than do teachers in the mathematics classes where every facility exists for teaching them.

   It is well known that pupils often "parrot" their history because they do not possess enough geographic concepts to make the materials of history intelligible. One can now say with at least equal certitude that pupils "parrot" their geography because their instructors try to teach them difficult concepts long before they possess the necessary minimum learning readiness for them.

SOME PROPOSALS

Enough is known today regarding the way children learn, and about their readiness to learn, to enable one to make certain recommendations pertaining to the geography program. Some of these are as follows:

1. Geography should not be taught earlier than the fourth grade.
2. Geographic education in the fourth grade should consist of home and community geography in which the child learns about:
   a. the natural environment locally
   b. the basic human activities locally
   c. the way man uses the materials, beauties, and advantages of the local area
   d. the local human community and its pattern as depicted on a simple local plan sketch
3. Geography in the fifth grade should start with the local community and study several other selected communities over the earth. A simple vicinal map of each community should be pasted on a blank globe in proper position, until the whole

global surface is covered. In the end, this surface should be peeled off and flattened out to form a simple globular map with a few parallels shown on it. The type communities studied should be selected so as to show change in living conditions with change in latitude over the globe.

4. In the sixth grade, learning should progress from local community to county, to state, to nation, taking a whole year to develop these concepts as tool ideas. Use of the adult map with full coordinates can be slowly introduced, and its use taught. Such concepts as region, land use, industry, city, and government should be taught and not merely referred to.
5. During the junior high school years, the seventh grade should be devoted to studying in great detail and with attempt at sympathetic understanding, the pre-industrial cultures of the world. In the eighth grade, the industrial cultures and industrialized nations should be studied and evaluated. In the ninth grade, the relations between the industrial and nonindustrial nations should be studied. Colonies, mandates, market areas, imperialism, diplomacy, war, and the United Nations organization's attempt at building a global human society should be examined.

Conclusion

If such a concrete program in geography were developed and carried out, and substituted for the present attempts to solve the problem of global concord thru historical, institutional, and other abstract and theoretical approaches, it may yet be possible to achieve a favorable outcome in the present race between education and catastrophe.

THREE PACIFIC NORTHWEST DAMS

OTIS W. FREEMAN
Eastern Washington College of Education

Even before Grand Coulee and Bonneville dams were completed and the generators installed in the power plants it became clear there was an immediate and growing need for additional sources of hydroelectric energy in the Pacific Northwest. To help correct this shortage of power three new dams are under construction and surveys have been made at about two dozen more damsites.

The three dams now under construction are the McNary and

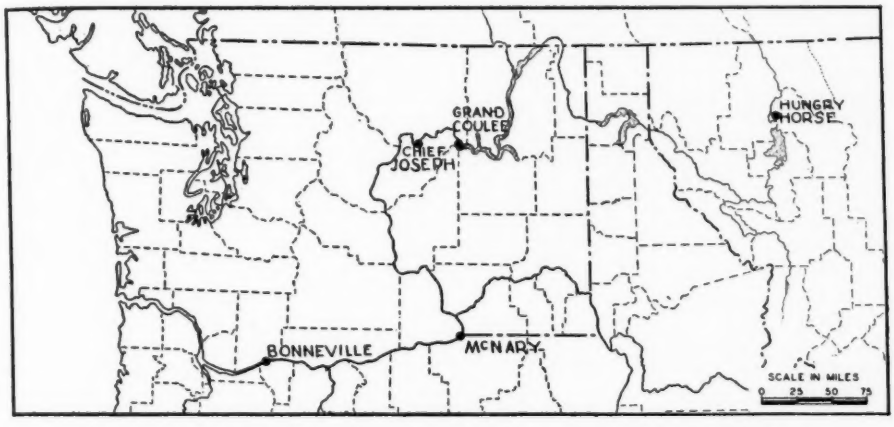


FIG. 1. Location of three new Federal projects now under construction.

Chief Joseph on the Columbia river below Grand Coulee and above Bonneville, and the Hungry Horse Dam on the south fork of the Flathead River near the southeast corner of Glacier National Park (Fig. 1). The McNary and Chief Joseph dams are being constructed under the plans and supervision of the Corps of Engineers, U.S. Army. The Hungry Horse Dam is supervised by the Bureau of Reclamation. Hungry Horse is a multiple project dam. In addition to power, water from the dam will irrigate some 40,000 acres of land in the Flathead Valley. The McNary Dam is another multiple purpose dam. It will supply water to irrigate over a third of a million acres near Umatilla, and locks have been installed for the improvement of navigation thru the Wallula Gap to Pasco. Chief Joseph Dam is primarily for power. All three dams have a certain value for flood control and the maintenance of a regular flow for the rivers.

McNARY DAM

Authorized by Congress in 1945, construction of the McNary Dam was begun in 1948, will be completed by 1951 and is expected to begin producing power from the first two units by 1953 and supplying water to thirsty acres a year or two later. Additional generating units will be installed at the rate of one every four months until capacity is reached. This multiple purpose dam was first sought in 1915 under the name of Umatilla Dam by the late Senator Charles L. McNary of Oregon who played a major

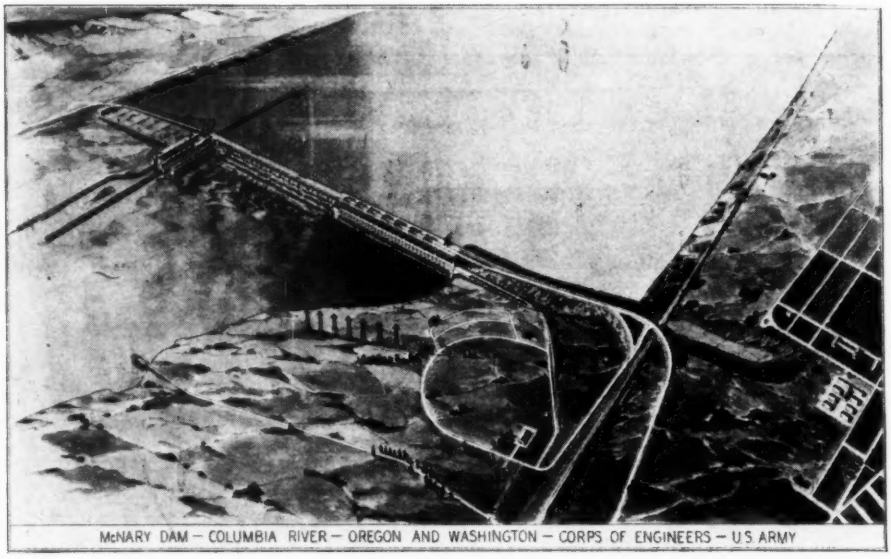


FIG. 2.

part in obtaining it and after whom the dam is named. Approximately 380,000 acres of fertile land, mostly in Oregon near Umatilla, will be irrigated from McNary Dam. When fully developed the power output will be 1,380,000 kilowatts, about two-thirds as great as that at Grand Coulee. Present estimated cost of the project is about $250,000,000, which may be revised upwards due to increases in both labor and materials. McNary dam is a concrete structure 7,365 feet long on top and rises 158 feet above the lowest bedrock (Fig. 2). It is built across the Columbia River at Umatilla Rapids, 198 miles east of Portland between the states of Washington and Oregon at the lower end of the Wallula Gap, a watergap some 10 miles long and 2,000 feet deep cut across the eastern end

of the Horse Heaven Hills. The bedrock is basaltic lava which because of the presence of joints and scoria requires considerable grouting to make watertight.

During construction, a coffer dam of circular cells of interlocking steel piling (filled with sand and rock) was first built on the Washington shore to exclude the river. Then debris was cleaned off the bedrock and the foundations of the dam were constructed in a series of cells or sections (with slots thru which the river can flow after removal of the first coffer dam). Construction of another coffer dam on the other side of the river behind which debris is now being removed will be followed by the construction of the other half of the dam including the powerhouse.

Fishways are an important feature of the dam. The Washington shore fishway will consist of a ladder 2,200 feet long and 30 feet wide with separate pools every 20 feet, each pool one foot higher. Another ladder will be on the Oregon shore and a fish lock 20 by 30 feet with a lift of 118 feet will also be installed. These installations should permit the migratory salmon and other fish to reach spawning grounds in upper tributaries of the Columbia River.

A navigation lock 675 feet in length and 86 feet wide is located on the Washington side and will lift boats a maximum of 92 feet, making it the highest single lift lock in the world. Minimum draft on the lower sill on the upstream end is 12 feet. The lock can be filled in 17 minutes and emptied in 15 minutes. The upstream gate will be 23 feet in height and the downstream gate 106 feet. The slack water will extend nearly to Pasco, 59 miles away and will cover the Umatilla Rapids, long a handicap to navigation. The chief upstream traffic consists of petroleum products from California, and the use of the waterway lessens the price of gasoline about three cents per gallon to interior points over the rail rates. Downstream a small volume of wheat is carried but the presence of the water competition has caused a lowering of railroad freight rates several cents a bushel on wheat shipped to Portland and thus benefits the farmers of the Inland Empire.

Two railroads and a main highway run thru the Wallula Gateway and long sections of right of ways will be covered by water. The construction of the dam will require the relocation of 83 miles of railway and 24 miles of state highway, 22 miles of power transmission lines and 24 miles of telephone and telegraph lines. Ap-

proximately 27 miles of levees will have to be constructed to protect some low areas.

During the peak of construction between 3,000 and 4,000 workers will be employed on the project. A permanent townsite, known as McNary, Oregon, will provide housing for the operation and maintenance staffs.

CHIEF JOSEPH DAM

The Chief Joseph damsite is at the mouth of Foster Creek near Bridgeport, Washington. The south bank of the Columbia consists of solid granite at this point, but the north bank is a huge gravel bar or terrace hundreds of feet thick and over a mile wide. Engineers do not consider it necessary to excavate this gravel deposite clear to bedrock but will construct a concrete wall or core for some distance into the deposit and lay approximately 2,000 lineal feet of rolled, impervious upstream blanket which will provide an adequate barrier to seepage. Chief Joseph is now designed wholly as a power project but there is a possibility of sometime irrigating from the reservior around 100,000 acres near the junction of the Okanogan and Columbia Rivers. The project, formerly called Foster Creek, is named after the leading chief of the Indians in the Nez Perce war, who is buried at Nespelem in the Okanogan Indian Reservation some miles from Bridgeport.

Development of the site was first recommended by the Corps of Engineers in 1932 and was authorized by Congress in 1946. Construction began in 1950 on this fifth dam across the Columbia River. No railroad reaches the damsite but a bridge is being built across the Okanogan River near its mouth and will be completed in the near future. Water to run the generators at Chief Joseph will be delivered thru an intake canal 27 feet deep, 3,000 feet long and 1,200 feet wide, which will be entirely man made. The construction of the dam will make the slack water pool at an elevation of 937½ feet, almost to the foot of Grand Coulee Dam whose reservior elevation is 1,288 feet. The completion of the dam and powerhouse and the installation of the first three generating units is scheduled to be finished by 1956. Estimated cost of the project when the initial 15 generating units are installed is $206,000,000. The project will be self liquidating.

Chief Joseph Dam will be a straight, gravity, overflow type of structure, 220 feet high and 1,484 feet long. The powerhouse will be constructed on the south bank at an angle to the axis of the dam.

There will be space for 27 generating units (15 to be installed under proposed contracts) and the powerhouse will be 2,000 feet long making it the largest single structure powerhouse on earth. The generator will have a rating of 64,000 kilowatts each, a total of 960,000 kilowatts for the proposed 15 units, and will be turned by vertical shaft turbines with a capacity of 100,000 horsepower each under a head of 165 feet. When all 27 units are completed the output of 1,728,000 kilowatts will make Chief Joseph the second largest power plant in the world, exceeded only by Grand Coulee.

By 1953 about 3,500 employees will be working on the construction.

Under a comprehensive plan of the U.S. Corps of Engineers other sites and their elevations downstream from Chief Joseph are: Wells at 767, Rocky Beach at 699, Rock Island (first built across the Columbia and the only private development) at 600, Priest Rapids at 550 which may be raised to 590 for river control, Ringold at 400, McNary at 340, John Day Rapids at 255, The Dalles at 160, and Bonneville 72 to 82½ depending on flow of the water. The elevations are in feet above sea level.

HUNGRY HORSE

Original surveys in the drainage basin of the Flathead River were initiated in 1921 and the building of the Hungry Horse Dam was authorized in 1944 by Congress. After preliminary clearing of the site and the reservoir, completion of designs, building of access roads, etc., actual construction began in 1948. The project should be completed in 1953 at an estimated cost of about $110,000,000. The work is under the supervision of the U.S. Bureau of Reclamation.

Hungry Horse dam, with a height of 564 above lowest bedrock will be the third highest concrete dam in the world. For comparison, Hoover Dam, 726 feet high and Shasta Dam, 602 feet outrank it in height. Grand Coulee is 550 feet. The volume of concrete will be 2,900,000 cubic yards as compared with Grand Coulee 10,585,000, Shasta 8,710,000 and Hoover, 4,400,000. Pouring of concrete began in September 1949 after 14 months spent in clearing the site, removal of debris, drilling to test the bedrock and other preliminary preparations. Work is suspended during part of the winter because of cold and snow. Three seasons of work will be required for pouring the concrete.

The site of the Hungry Horse is a canyon cut out in precambrian rock on the south fork of the Flathead River (Fig. 3). The crest of the dam will be 2,100 feet in length. It will create a 34-mile long attractive mountain lake with a maximum width of 3½ miles and covering 22,500 acres. Hungry Horse will generate

FIG. 3. Hungry Horse project.

285,000 kilowatts from four power units, and in addition will store water for downstream projects; two of the Montana Power Company at Kerr and Thompson Falls; and the Grand Coulee, Chief Joseph, Rock Island, McNary, Bonneville, and other recommended dams to be constructed.

During construction the flow of the South Fork will be diverted past the damsite thru a diversion tunnel, 1,180 feet long and 36

feet in diameter, already constructed. Two coffer dams will exclude the river water from the damsite during construction. When the dam is high enough for storage the diversion tunnel will be sealed with a plug of concrete.

In addition to towns already existing nearby like Kalispell, Columbia Falls, Coram, Belton, and Whitefish, four new communities have sprung up called Hungry Horse, Martin City, South Fork, and Wagsmith Villa. About 4,000 men will be employed at the peak of construction activity.

Approximately 43,000 acres of land near Kalispell can be irrigated from Hungry Horse, and it is expected that this development will be authorized by Congress in the near future.

Flood control will be a major contribution of Hungry Horse Dam. It will eliminate floods in the Flathead Valley and will reduce peak discharges between there and Grand Coulee Dam from 10 to 25 per cent. Even floods at Portland, Oregon will be reduced at least 9 inches by this dam during the spring runoff. The reservoir at Hungry Horse can store 2,000,000 feet for control of floods where necessary. Total storage capacity is 3,500,000 acre feet.

Ultimately the river regulation made possible by Hungry Horse will increase by nearly 500,000 kilowatts the firm capacities of downstream power plants, now built or planned when full development of the Columbia River is completed. Power from Hungry Horse will be marketed thru the Bonneville Power Administration.

REPORT OF THE THIRTY-SIXTH MEETING OF THE NCGT

More than three hundred members and guests of the National Council of Geography Teachers registered for the meetings on November 24 and 25 at Edgewater Beach Hotel in Chicago. Among those in attendance were teachers of geograhy and science at all grade levels, students, supervisors and administrators. Members from thirty-two states and Canada were present. More than seventy-nine colleges and universities were represented from twenty-seven different states. Twenty-eight new members affiliated at registration.

The complete program was published in the November issue of the JOURNAL.

The National Council was especially pleased to present in Panel Discussion, the official United States Delegation to the UNESCO International Seminar on the Teaching of Geography as an Aid to International Understanding held in Montreal the summer of 1950. The delegates were: Zoe A. Thralls, University of Pittsburgh; Thomas F. Barton, Indiana University; Marion H. Seibel, School 52, Buffalo, New York; Sister Mary Ursula Hauk, St. Columba's Convent, Johnstown, Pa.

Another special interest group was the nine teachers from southwestern Pennsylvania who reported on findings in planning curriculum studies and functional geographic education in their schools.

At the luncheon, one hundred thirty-four were present. The State Coordinators were hosts and hostesses. The theme of the program was "Spotlight on UNESCO and NCGT." Each of the UNESCO Delegates gave an informal anecdotal account of some phase of the summer's Seminar.

At the banquet in the evening, more than one hundred fifty were present with Dr. Durand presiding. The JOURNAL OF GEOGRAPHY Prize awards were announced by Dr. Zoe A. Thralls, Associate Editor of the JOURNAL OF GEOGRAPHY.

An unannounced number on the evening's program was a token of appreciation to Dr. George J. Miller, one of the founders of the National Council and for thirty years the Editor of the JOURNAL OF GEOGRAPHY. Dr. S. S. Visher, chairman of the committee to honor Dr. Miller, read the citation and excerpts from letters written by fellow geographers and colleagues, and presented a check to Dr. Miller.

The Distinguished Service Award Citation was read by Mary Jo Read in the absence of Alison Aitchison, chairman of the committee. The Award was presented to Dr. Vernor C. Finch of the University of Wisconsin in recognition of his leadership and outstanding contributions to geographic education and research over the years. The full reading of the Citation appears in the January issue of the JOURNAL.

The National Council was honored by the presence of Dr. George H. T. Kimble, Director of the American Geographical Society. His address "The Role of Geography at the Mid-Century" dealt with the responsibilities and principles that should concern geographers in this troubled world.

At the close of the banquet, the receiving line of past-presidents met the guests. Then many NCGT members attended the Central Association of Science and Mathematics Teachers informal Mixer.

MINUTES OF THE FOURTH GENERAL ASSEMBLY

At two o'clock on Saturday afternoon, November 25, 1950, forty-one members remained to conduct the business while others departed into storm-bound regions as travel conditions worsened.

The Secretary reported that membership continued to grow altho the annual turn-

over is about two hundred. When dues lapse, members are continued on inactive status for one year but they do not receive the JOURNAL. Two points to note are: 1. Delay in sending membership dues often results in the missing of some issues of the JOURNAL, and 2. subscriptions thru an agency bring only the JOURNAL and not a membership in the NCGT. The agent's commission is lost to us as dues for membership. The Contributing Memberships continue at a high level with seventy-one listed in 1950. Already the 1951 list has eleven names. Sixty-five per cent of our members are in the northeastern part of the nation. The largest percentage gains have been in some of the western states. The rating of FELLOW for those with five or more consecutive years' membership was attained by 108 members during 1950. Professional Paper No. 10 will be available after December 1, 1950; Papers No. 11 and No. 12 will be available early in the coming year. As a result of action at Board meetings, the Secretary announced two bonus publications to members in good standing early in 1951.

Treasurer John H. Garland reported on the financial status of the National Council. Dr. Lathrop moved that the report be accepted and placed in file. Dr. Visher seconded the motion. Passed.

The report of the Planning Committee was given by Katheryne T. Whittemore, chairman. With the theme, "Leadership in Geographic Education," she sketched briefly the history of the Planning Committee and the work accomplished during its four-year existence. Three phases of the committee's work were: 1. analysis of the resources of the National Council of Geography Teachers and of the interests of the members; 2. consideration of possible activities and enterprises; 3. development of a basic philosophy.

The first report of the Planning Committee made in 1947 recommended three types of projects in addition to those carrying on routine business: 1. continued work on projects already begun; 2. activities growing out of interests expressed in answers to a questionnaire and the discussions at the annual meeting of 1946; and 3. new projects of the survey type. Two functions of the NCGT that have long been recognized are those of making fact-finding surveys and serving as a clearing house. Much more thought and discussion are needed before a basic philosophy can be stated. Within what framework should the Council work? How can it assume and carry out leadership in geographic education?

Three recommendations have been presented to the Executive Board: 1. there should be a Planning Committee; 2. the composition and terms of membership should be determined by the Executive Board, and 3. its work should be carefully delimited by the Executive Board.

Motion to accept the report was made by Dr. Visher and seconded by Erna G. Gilland. Motion carried.

A progress report on the Survey of the Status of Secondary School Geography was given by Lillian Worley. Last year in Cleveland, the committee 1. deliniated the work, 2. set the plan for the study and 3. realized the need for cooperative efforts of State Coordinators. A grant from the research fund made possible a twenty-five per cent sample. The questionnaire, limited to one page and sent with an explanatory letter to school principals, was mailed by State Coordinators. Complete returns have come from thirty states with all but three Coordinators participating. Motion to accept the report was made by Thomas F. Barton and seconded by Frances M. Hanson. Motion passed.

Appointments to committees were announced. These have appeared in previous issues of the JOURNAL. Announcement was made of the setting up of a Committee on Committees to study the status of and recommended policies on several standing committees. A report on some aspects of UNESCO-NCGT contacts was given by President Durand.

REPORT OF THE RESOLUTIONS COMMITTEE

The Resolutions Committee presents the following report to the National Council of Geography Teachers assembled in Chicago, Illinois, November 24 and 25, 1950.

Be It Resolved that the National Council of Geography Teachers express appreciation:

To the Committee on Local Arrangements and members who have contributed in one way or another to the definite success and many pleasures of the meetings,

To the Office Staff and other personnel of the Edgewater Beach Hotel for their hospitality and courtesy for providing us with such effective accommodations for the meetings,

To the Central Association of Science and Mathematics Teachers who have jointly participated in this program,

To the publishers whose exhibits were informative and of interest,

To the members of the Executive Board for their untiring efforts and valuable vision.

Be It Further Resolved, that:

The National Council of Geography Teachers record its deep sense of personal loss in the death of Isaiah Bowman. For many years Dr. Bowman was Director of the American Geographical Society. As Director of this Society, Dr. Bowman gave unstinted support to the National Council.

After twenty years of invaluable service to the Society, he became President of Johns Hopkins University. Upon retirement he continued his tremendous service in research for our national government. No description of his achievements can convey the force of his personality. His warm human understanding and delightful sense of humor made him a charming companion to young and old alike. He was a great leader and sincere friend whose influence will endure undimmed by the passage of time.

The National Council of Geography Teachers expresses its sorrow at the passing of Dr. Lewis Francis Thomas who for many years took an active part in the work of the Council. Only last year, Dr. Thomas presented an outstanding paper at the meetings in Cleveland.

By his death we have lost a beloved associate whose outstanding character as a teacher reflected high honor upon our profession and whose memory is a worthy inspiration for all time.

The National Council of Geography Teachers expresses its sense of loss in the death of Dr. Oliver Edwin Baker. Dr. Baker was long a recognized authority on agricultural land utilization. He was a strong advocate of what he called "rurban living"—a combination of city employment and suburban living, with some degree of self-sufficiency provided by part time farming.

All of those who came in contact with Dr. Baker not only profited from his vast knowledge but also learned the full significance of one of his favorite expressions, "There is no wealth but life."

In submitting this report, the Resolutions Committee recommends its adoption. It further recommends that these Resolutions be recorded upon the Minutes of this meeting and that the Secretary send letters of appreciation to individuals and organizations, and letters of sympathy to the respective families.

MARY VIOLA PHILLIPS, *chairman*
GEORGE J. MILLER
ALFRED H. MEYER

Miss Alice Foster of the University of Chicago and chairman of the Nominating Committee presented the following slate of candidates:

President: Harry O. Lathrop, Illinois State Normal University

First Vice-President: Clyde F. Kohn, Northwestern University

Second Vice-President: Ina C. Robertson, State Teachers College, Valley City, North Dakota

Treasurer: John H. Garland, University of Illinois.

For membership on the Executive Board 1951-1953: Elizabeth Eiselen, Wellesley College; and Annice Davis Elkins, Supervisor of Instruction, Osceola County, Kissimmee, Florida.

Nominations from the floor were then opened and the name of Otis W. Freeman of Cheney, Washington, was added to the list for Vice-President. The candidates submitted by the committee were elected.

The incoming President, Harry O. Lathrop, spoke briefly on the year ahead which begins officially on February 1, 1951. He commented on the possible need for presenting two names on the ballots. He announced that the meeting in 1951 will be held in Pittsburgh, Pennsylvania. He urged members to write suggestions about the program and people to present papers.

The proposed changes in the Constitution were considered.

At present Article 7 of the Constitution reads: "An amendment to this Constitution or its By-Laws shall become effective upon approval by a majority vote of the General Assembly, provided that the amendment shall have been approved previously by a majority vote of the Executive Board after notification at least a month in advance, and provided further that the proposed amendment shall have been included in the announcement of the annual meeting."

The proposed revision of Article 7 now reads:

Section 1. An amendment to this Constitution shall become effective upon approval by a majority of the General Assembly, provided that the amendment shall have been approved previously by a majority vote of the Executive Board after notification at least a month in advance, and provided further that the proposed amendment shall have been included in the announcement of the annual meeting.

Section 2. An amendment to the By-Laws shall be effective upon the majority vote of the Executive Board.

It was moved by Dr. Lathrop and seconded by Mamie Anderzhon that the revision be accepted and adopted. The motion was passed unanimously. It was further recommended that the revisions in the Constitution be published at the first convenient time.

The history of the WOTP was reviewed by Erna G. Gilland, delegate to the Fourth Assembly in Ottawa, Canada, July 1950. She reported that the major project is an international study of geography textbooks. Thirteen countries have undertaken this study. The report was accepted on the motion of J. W. Nystrom and seconded by S. S. Visher.

The meeting adjourned at exactly four o'clock, thus closing the thirty-sixth meeting of the Council.

Signed

M. MELVINA SVEC, *Secretary*

THE NATIONAL COUNCIL AT WORK

The Fourth Annual General Assembly, meeting at Chicago on the afternoon of Saturday, November 25, voted a change in the Constitution. Article 7 now reads:

Article 7. *Amendment.*

Section 1. An amendment to this Constitution shall become effective upon approval by a majority of the General Assembly, provided that the amendment shall have been approved previously by a majority vote of the Executive Board after notification at least a month in advance, and provided further that the proposed amendment shall have been included in the announcement of the annual meeting.

Section 2. An amendment to the By-Laws shall be effective upon the majority vote of the executive Board.

The Executive Board, meeting later on November 25, voted the following change in the by-laws.

Article 5. Finance. Section 1. Dues. Membership dues are payable annually in advance. Dues for Annual Members and Fellows shall be Four Dollars, including subscription to the JOURNAL OF GEOGRAPHY. Annual contributions from Contributing Members shall be Ten Dollars or more, including subscription to the JOURNAL OF GEOGRAPHY, such contributions to be payable so long as each Contributing Member may elect.

The names of Anna C. Larson and Earl B. Shaw were inadvertently omitted from the list of Contributing members published in the program of the Chicago meeting, November 24 and 25. New contributing members since November, 1950 and thru December 31, 1950, are the following:

Nels A. Bengtson
Norman Carls
Rose B. Clark
Elizabeth Eiselen
Mary Louise Fagg
Dr. Gilbert H. Grosvenor
Frances M. Hanson
G. David Koch
Katherine Jean Lang
Minnie E. Lemaire
Joseph T. Maddox
Carl Mapes
Alfred H. Meyer
Edith P. Parker
Mary Catherine Roberts
Edith R. Shannon
Cora P. Sletten
Cyril L. Stout
Arthur G. Tillman
Elizabeth D. Zachari

The membership of the *Committee on Tests* is now complete, and the new committee is now ready to continue the work of the National Council in this important field. The committee is composed of the following: Viola M. Bohn, 110½ Avenue C, Bismarck, North Dakota, chairman; Arthur C. Carthew, Los Angeles City College, Los Angeles, California; Berenice Casper, State Teachers College, Trenton, New Jersey; Lynn H. Halverson, Northern Michigan College of Education, Marquette, Michigan; Mrs. Cordelia Harbeson, Waveland, Indiana; Homer Knight, Wayne University, Detroit, Michigan; Addelle Zigrang, 206 South Elmwood Avenue, Peoria, Illinois; John J. Astuno, 2551 W. 39th Street, Denver, Colorado; and Robert S. Funderburk, Central Washington College of Education, Ellenburg, Washington. Interests in the teaching of geography from the elementary thru the college level are represented on the committee.

The undersigned is appointing a committee to revise and bring up to date the publication *The National Council of Geography Teachers as a Working Organization.* The original seventeen-page mimeographed publication was compiled in 1941 by Alice Foster and Thomas F. Barton, the President and Secretary during that year. The revised issue will record our history and accomplishments of the last ten years.

LOYAL DURAND, JR., *President*

GEOGRAPHICAL PUBLICATIONS

Educators Guide to Free Films, Tenth Annual Edition (compiled and edited by Mary Foley Horkheimer and John W. Diffor, John Guy Fowlkes, educational consultant) Educators Progress Service, Randolph, Wisconsin, 1950. 392 pp., $5.00.

Educators Guide to Free Slidefilms, Second Annual Edition (compiled and edited by Mary Foley Horkheimer and John W. Diffor) Educators Progress Service, Randolph, Wisconsin, 1950. 128 pp., $3.00.

Educators Guide to Free Films should be very helpful to the geography teacher who wishes to use movies without straining the visual-aid budget. Examination of descriptions of almost two thousand films reveals a wealth of movies suitable for geography classes and available on payment only of transportation charges. The teacher should note, however, that many films which have geographic content are not listed under Geography, but can be found under such general titles as Agriculture, Home Economics, Recreation, Biology, Chemistry, and various subheadings under Social Studies.

Both government-produced films and those sponsored by various commercial and industrial firms are included. Not all available free films are listed; titles restricted to limited territorial distribution as well as those under controlled distribution are omitted. The most conspicuous absence noted is the series of films prepared on the Latin American countries by the Coordinator of Inter-American Affairs. Nevertheless the teacher is hard to satisfy who cannot find numerous usable titles.

For each film the editors give such necessary information as a brief description of contents, date of release, size (the majority are 16mm.), number of reels, whether sound or silent, color or black and white, running time, and name of distributor. The address of the latter is found in the Source and Availability Index along with reference to other films distributed by the producer, the probable availability of the film ("Able to fill about 90% of all requests."), and the time which should be allowed for booking. In addition there is a Title Index and an alphabetical Subject Index.

The greatest value of the publication seems to lie in gathering together the large number of films sponsored by commercial and industrial firms. Many teachers have been afraid to use such sponsored films, and often justifiably so in the past. Early sponsored films frequently contained too much "sales talk." However, to quote from an article written for this edition by Dean Fowlkes of the University of Wisconsin School of Education, "There is increased evidence today of more and more so-called sponsored films being produced which avoid the old flagrant advertising which ten years ago was a mark characteristic of the sponsored film." The geography teacher who does not investigate the availability and suitability of the many free films sponsored by government and industry is missing an opportunity to enrich his classroom presentation with little expense. This volume simplifies such investigation.

Educators Guide to Free Slidefilms has been prepared on the same plan and with information similar to that included in *Educators Guide to Free Films.* As yet there are listed only a limited number of free slidefilms (filmstrips) pertinent to the field of geography. It would seem that for the present the volume has its greatest value in a school library where teachers in many fields, including geography, can have access to it. It would be advisable to watch for future editions; undoubtedly the listing and, therefore, the value will increase with each edition, as they have in the case of free films.

ELIZABETH EISELEN

Wellesley College

Ph. H. Kuenen. **Marine Geology.** John Wiley and Sons, Inc., New York, 1950. 568 pages, 246 maps and diagrams. Selected bibliography. Index. $7.50.

Geographers as well as geologists are interested in the configuration of the surface of the earth, but usually the expression connotes merely the configuration of the surface of the land. Of late, however, the seafloor has become a field of investigation spurred on by a realization that economic relationships may be discovered as well as light may be thrown upon the origin of islands and of ocean deeps. Several noteworthy volumes prepared by such well-known geologists and oceanographers as Daly, Bourcart, Sverdrup, and Shepard have been published within the past decade or so. To this list has now been added a carefully prepared scientific and philosophic treatise by Doctor Kuenen of the Geological Institute of Groningen, the Netherlands.

The field covered by Kuenen's book is well indicated by its representative chapter headings: Physical Oceanography, The Sea Basins, the Indonesian Deep-Sea Depressions, Sources and Transportation of Marine Sediments, Coral Reefs, Geomorphology of the Sea Floor, and Eustatic Changes of Level. These chapters are illustrated by several maps and by 246 sketches and diagrams based on stated evidence and designed to aid in visualizing the discussions. One of the impressive features of the work is the clear statement of how the field was carried out and the techniques of operation as well as the recording of data. To most geographers and geologists this presentation is of particular value because of the differences of methodology that must apply to seafloor research compared with investigation of land features.

Kuenen challenges many of the theories that have been propounded by philosophic observers from ancient to recent times, among them the legend of Atlantis and Wegener's theory of continental drift. Regardless of the extent to which these discussions may be accepted or questioned by readers, we believe that the method of presenting new explanations based upon recorded facts and observations deserves commendation. The author is modest yet frank in his statements of facts and deductions therefrom and suggests clearly the need for further scientific research in order to meet the problems yet unsolved. The book, carefully prepared and edited, is one that merits study by all who are interested in the surface features of the earth, sea floor as well as land surfaces.

NELS A. BENGTSON

University of Nebraska

Halene Hatcher. **Better Living through Wise Use of Resources.** Bull. 1950, No. 15. Federal Security Agency, Office of Education, Washington, D.C., 78 pp. 1950. 25¢.

This pamphlet of 76 pages is filled with concise information which will assist teachers and students to understand our natural resources and the problems arising from their use. About half of the bulletin is devoted to practical suggestions for effective conservation education. This will be very useful to all teachers of the subject, more especially those in the public schools. Several pages are devoted to teaching materials and aids. Selected references are given for use in elementary and secondary schools and by teachers. The author is Educationist for Geography and Conservation in the Division of Elementary and Secondary Schools in the Office of Education. The publication will be welcomed by all teachers of conservation and others interested in the subject.

OTIS W. FREEMAN

Eastern Washington College of Education, Cheney